WHAT IS CLAIMED IS:

1.   A method of synchronizing two end terminals in a wireless local area network, the method comprising:

communicating with a first terminal via first and second channels and communicating with a second terminal via the first and second channels;

transmitting a first series of beacon frames (B_{11}, B_{21}, B_{31},..., B_{i1},..., and B_{n1}) and a second series of beacon frames (B_{12}, B_{22}, B_{32},..., B_{i2},..., and B_{n2}) over the first and second channels, respectively;

obtaining beacon intervals (b_{i1}, b_{i2}), wherein b_{i1} represents the beacon interval between the ith beacon frame (B_{i1}) and the $(i+1)^{th}$ beacon frame ($B_{(i+1)1}$) for the first series of beacon frames and b_{i2} represents the beacon interval between the ith beacon frame (B_{i2}) and the $(i+1)^{th}$ beacon frame ($B_{(i+1)2}$) for the second series of beacon frames;

calculating the beacon interval offset value ($\Delta b_i = |b_i 1 - b_i 2|$); and

setting the interval between the beacon frames ($B_{(i+1)1}$ and ($B_{(i+2)1}$) in the first channel, and the interval between the beacon frames ($B_{(i+1)2}$ and ($B_{(i+2)2}$) in the second channel, based on the calculated offset value (Δb_i) so as to perform beacon synchronization.

2.   The method of Claim 1, wherein the wireless local area network includes a multiple channel based access point, and wherein the method is performed in the access point.

3.   The method of Claim 1, further comprising storing the obtained beacon intervals (b_{i1}, b_{i2}).

4.   The method of Claim 1, wherein the setting comprises adding the offset value (Δb_i) to the previous beacon interval (b_{i1}) such that the value ($b_{i1} + \Delta b_i$) is set as the interval between the beacon frames ($B_{(i+1)1}$ and ($B_{(i+2)1}$) in the first channel whereas the interval between the beacon frames ($B_{(i+1)2}$ and ($B_{(i+2)2}$) in the second channel is maintained.

5. The method of Claim 1, wherein the setting comprises subtracting the offset value (Δb_i) from the previous beacon interval (b_{i2}) such that the value $(b_{i2}-\Delta b_i)$ is set as the interval between the beacon frames $(B_{(i+1)2}$ and $(B_{(i+2)2})$ in the second channel whereas the interval between the beacon frames $(B_{(i+1)1}$ and $(B_{(i+2)1})$ in the first channel is maintained.

6. The method of Claim 1, wherein the wireless local area network follows the protocol of one of the IEEE 802.11a/11b/11g standards.

7. A method of synchronizing two end terminals in a wireless local area network including an access point, the method comprising:

communicating data wirelessly between the access point and a first terminal via first and second channels and between the access point and a second terminal via the first and second channels;

transmitting, at the access point, a first series of beacon frames $(B_{11}, B_{21}, B_{31},..., B_{i1},...,$ and $B_{n1})$ and a second series of beacon frames $(B_{12}, B_{22}, B_{32},..., B_{i2},...,$ and $B_{n2})$ over the first and second channels, respectively;

obtaining beacon intervals (b_{i1}, b_{i2}), wherein b_{i1} represents the beacon interval between the ith beacon frame (B_{i1}) and the $(i+1)^{th}$ beacon frame $(B_{(i+1)1})$ for the first series of beacon frames and b_{i2} represents the beacon interval between the ith beacon frame (B_{i2}) and the $(i+1)^{th}$ beacon frame $(B_{(i+1)2})$ for the second series of beacon frames;

storing the obtained beacon intervals (b_{i1}, b_{i2});

calculating, at the access point, the beacon interval offset value $(\Delta b_i=|b_{i1}-b_{i2}|)$; and

setting, at the access point, the interval between the beacon frames $(B_{(i+1)1}$ and $(B_{(i+2)1})$ in the first channel, and the interval between the beacon frames $(B_{(i+1)2}$ and $(B_{(i+2)2})$ in the second channel, based on the calculated offset value (Δb_i) so as to perform beacon synchronization.

8. The method of Claim 7, wherein the obtaining of the beacon intervals

comprises timing the intervals (b_{i1}, b_{i2}) between the ith beacon frames (B_{i1}, B_{i2}) and the $(i+1)^{th}$ beacon frames $(B_{(i+1)1}, B_{(i+1)2})$, respectively, using a hardware timer.

9. The method of Claim 7, wherein each of the channels is either a physical channel or a logical channel.

10. A system for synchronizing two end terminals in a wireless local area network, comprising:

a control module programmed to i) communicate with a first terminal via first and second channels and communicate with a second terminal via the first and second channels, ii) transmit a first series of beacon frames $(B_{11}, B_{21}, B_{31},..., B_{i1},...,$ and $B_{n1})$ and a second series of beacon frames $(B_{12}, B_{22}, B_{32},..., B_{i2},...,$ and $B_{n2})$ over the first and second channels, respectively, iii) obtain beacon intervals (b_{i1}, b_{i2}), wherein b_{i1} represents the beacon interval between the ith beacon frame (B_{i1}) and the $(i+1)^{th}$ beacon frame $(B_{(i+1)1})$ for the first series of beacon frames and b_{i2} represents the beacon interval between the ith beacon frame (B_{i2}) and the $(i+1)^{th}$ beacon frame $(B_{(i+1)2})$ for the second series of beacon frames, iv) calculate the beacon interval offset value $(\Delta b_i = |b_i 1 - b_i 2|)$ and v) set the interval between the beacon frames $(B_{(i+1)1}$ and $(B_{(i+2)1})$ in the first channel, and the interval between the beacon frames $(B_{(i+1)2}$ and $(B_{(i+2)2})$ in the second channel, based on the calculated offset value (Δb_i) so as to perform beacon synchronization; and

a memory in data communication with the control module and configured to store information for beacon synchronization;

wherein the control module and the memory are integrated in an access point.

11. The system of Claim 10, wherein the access point comprises a multi channel medium access control (MC-MAC) based access point.

12. The system of Claim 10, wherein the access point comprises first and

-15-

second access points being in data communication with each other, the first access point being in data communication with the first and second stations via the first channel, the second access point being in data communication with the first and second stations via the second channel.

13. The system of Claim 12, wherein the first and second access points are installed together in a single unit.

14. The system of Claim 10, wherein the control module is further configured to add the offset value (Δb_i) to the previous beacon interval (b_{i1}) such that the value ($b_{i1}+\Delta b_i$) is set as the interval between the beacon frames ($B_{(i+1)1}$ and ($B_{(i+2)1}$)) in the first channel whereas the interval between the beacon frames ($B_{(i+1)2}$ and ($B_{(i+2)2}$) in the second channel is maintained.

15. The system of Claim 10, wherein the access point further comprises a hardware timer configured to time the beacon intervals (b_{i1}, b_{i2}) between the ith beacon frames (B_{i1}, B_{i2}) and the $(i+1)^{th}$ beacon frames ($B_{(i+1)1}$, $B_{(i+1)2}$), respectively.

16. The system of Claim 10, wherein the wireless local area network comprises the IEEE 802.11a/11b/11g networks.

17. A system for synchronizing two end terminals in a wireless local area network, comprising:

a control module programmed to perform i) communicate with a first terminal via first and second channels and communicate with a second terminal via the first and second channels, ii) transmit a first series of beacon frames (B_{11}, B_{21}, B_{31},..., B_{i1},..., and B_{n1}) and a second series of beacon frames (B_{12}, B_{22}, B_{32},..., B_{i2},..., and B_{n2}) over the first and second channels, respectively, iii) obtain beacon intervals (b_{i1}, b_{i2}), wherein b_{i1} represents the beacon interval between the ith beacon frame (B_{i1}) and the $(i+1)^{th}$ beacon frame ($B_{(i+1)1}$) for the first series of beacon frames and b_{i2} represents the beacon interval between the ith beacon frame (B_{i2}) and the $(i+1)^{th}$

beacon frame ($B_{(i+1)2}$) for the second series of beacon frames, iv) calculate the beacon interval offset value ($\Delta b_i = |b_i 1 - b_i 2|$) and v) set the interval between the beacon frames ($B_{(i+1)1}$ and $B_{(i+2)1}$) in the first channel, and the interval between the beacon frames ($B_{(i+1)2}$ and $B_{(i+2)2}$) in the second channel, based on the calculated offset value (Δb_i) so as to perform beacon synchronization; and

a memory in data communication with the control module and configured to store information for beacon synchronization;

wherein the control module and the memory are integrated in at least one of the first and second terminals.

18.   The apparatus of Claim 17, wherein the control module is further configured to subtract the offset value (Δb_i) from the previous beacon interval (b_{i2}) such that the value ($b_{i2} - \Delta b_i$) is set as the interval between the beacon frames ($B_{(i+1)2}$ and $B_{(i+2)2}$) in the second channel whereas the interval between the beacon frames ($B_{(i+1)1}$ and $B_{(i+2)1}$) in the first channel is maintained.

19.   The system of Claim 17, wherein each of the terminals comprises one of the following: a personal computer (desktop, laptop, palmtop), a mobile phone, or other portable communication devices such as a hand-held PC, a wallet PC and a personal digital assistant (PDA).

20.   A system for synchronizing two end terminals in a wireless local area network, the apparatus comprising:

means for communicating with a first terminal via first and second channels and communicating with a second terminal via the first and second channels;

means for transmitting a first series of beacon frames (B_{11}, B_{21}, B_{31},..., B_{i1},..., and B_{n1}) and a second series of beacon frames (B_{12}, B_{22}, B_{32},..., B_{i2},..., and B_{n2}) over the first and second channels, respectively;

means for obtaining beacon intervals (b_{i1}, b_{i2}), wherein b_{i1} represents the beacon interval between the ith beacon frame (B_{i1}) and the $(i+1)^{th}$ beacon frame

$(B_{(i+1)1})$ for the first series of beacon frames and b_{i2} represents the beacon interval between the ith beacon frame (B_{i2}) and the $(i+1)^{th}$ beacon frame $(B_{(i+1)2})$ for the second series of beacon frames;

means for calculating the beacon interval offset value $(\Delta b_i = |b_i 1 - b_i 2|)$; and

means for setting the interval between the beacon frames $(B_{(i+1)1}$ and $(B_{(i+2)1})$ in the first channel, and the interval between the beacon frames $(B_{(i+1)2}$ and $(B_{(i+2)2})$ in the second channel, based on the calculated offset value (Δb_i) so as to perform beacon synchronization.